

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau(43) International Publication Date  
8 February 2001 (08.02.2001)

PCT

(10) International Publication Number  
**WO 01/09377 A1**(51) International Patent Classification<sup>7</sup>: **C12Q 1/68**8 New Court, Dorchester Close, Northolt, Middlesex UB5 4PF (GB). **CARDY, Donald, Leonard, Nicholas** [GB/GB]; Trinlan, Blacksmith's Lane, Aston-le-Walls, Northamptonshire NN11 6UN (GB).

(21) International Application Number: PCT/GB00/02962

(22) International Filing Date: 31 July 2000 (31.07.2000)

(74) Agent: **KEITH W NASH & CO**; 90-92 Regent Street, Cambridge CB2 1DP (GB).

(25) Filing Language: English

(26) Publication Language: English

(81) Designated States (*national*): AU, CA, JP, US.

(30) Priority Data:

9917813.9 ✓ 29 July 1999 (29.07.1999) GB  
60/149,176 ✓ 17 August 1999 (17.08.1999) US(84) Designated States (*regional*): European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).(71) Applicant (*for all designated States except US*): **CYTOCELL LIMITED** [GB/GB]; Unit 6, Somerville Court, Trinity Way, Adderbury, Banbury, Oxfordshire OX17 3SN (GB).

Published:

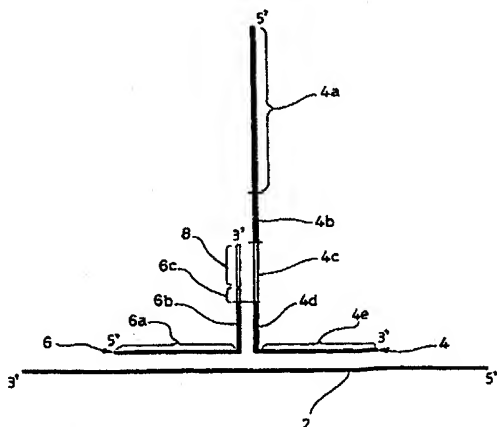
- With international search report.
- Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **LLOYD, John, Scott** [GB/GB]; 14 Windsor Close, King Sutton, Oxfordshire OX17 3QT (GB). **WESTON, Anthony** [GB/GB];

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD FOR DETECTING NUCLEIC ACID TARGET SEQUENCES INVOLVING IN VITRO TRANSCRIPTION FROM AN RNA POLYMERASE PROMOTER



(57) Abstract: Disclosed is a complex formed by a hybridisation reaction comprising four nucleic acid molecules; the complex comprising a target nucleic acid molecule and first, second and third nucleic acid probe molecules; wherein the first probe comprises a foot region which is complementary to a first portion of the target and is hybridised thereto, and an arm region which is substantially non-complementary to the target; the second probe comprises a foot region which is complementary to a second portion of the target, such that the foot region of the second probe is hybridised to the target adjacent or substantially adjacent to the foot region of the first probe, the second probe also comprising an arm region which is substantially non-complementary to the target but which is complementary and hybridised to the arm region of the first probe; the third probe being complementary, at least in part, to a portion of the arm region of the first probe, such that third probe is hybridised to the arm region of the first probe adjacent or substantially adjacent to the second probe; and wherein formation of the complex creates a functional double-stranded RNA polymerase promoter, one strand of the promoter being provided by the first probe, and the other strand being provided jointly by the second and third probes.

and probe and by the third probe; and a method of detecting a target nucleic acid sequence of interest which method involves the formation of the complex.

WO 01/09377 A1